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09/646,194	09/14/2000	Hisashi Saiga	55051(1117)	5757		
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	& ANGELL, LLP	BASOM, BLAINE T				
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Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.		Applicant(s)					
Office Action Summary		09/646,194		SAIGA ET AL.					
		Examiner		Art Unit					
		Blaine Basc	om	2173					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply									
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR.1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).									
Status									
1)⊠ R	esponsive to communication(s) filed on 31 Ja	anuary 2006.							
•	This action is FINAL . 2b) This action is non-final.								
3)□ S	, _								
cl	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.								
Disposition of Claims									
4)⊠ Claim(s) <u>28,29,31-39 and 41-55</u> is/are pending in the application.									
4a) Of the above claim(s) is/are withdrawn from consideration.									
5)□ C	laim(s) is/are allowed.				•				
6)⊠ C	6)⊠ Claim(s) <u>28,29,31-39 and 41-55</u> is/are rejected.								
7) 🗌 C	laim(s) is/are objected to.								
8)□ C	8) Claim(s) are subject to restriction and/or election requirement.								
Application	n Papers								
9) The specification is objected to by the Examiner.									
10)⊠ The drawing(s) filed on <u>14 September 2000</u> is/are: a)⊠ accepted or b)□ objected to by the Examiner.									
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).									
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).									
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.									
Priority un	der 35 U.S.C. § 119	•							
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1 ✓ Cortified copies of the priority documents have been received.									
 1. ☐ Certified copies of the priority documents have been received. 2. ☐ Certified copies of the priority documents have been received in Application No 									
3. Copies of the certified copies of the priority documents have been received in Application No									
application from the International Bureau (PCT Rule 17.2(a)).									
* See the attached detailed Office action for a list of the certified copies not received.									
			:						
Attachment(s	9)								
1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)									
3) 🔯 Informa	of Draftsperson's Patent Drawing Review (PTO-948) tion Disclosure Statement(s) (PTO-1449 or PTO/SB/08) No(s)/Mail Date <u>3/21/2006</u> .		Paper No(s)/Mail Da 5) Notice of Informal Pa 6) Other:		O-152)				

DETAILED ACTION

Response to Arguments

The Examiner acknowledges the Applicants' amendments to claims 28 and 38. In response to these amendments, the 35 U.S.C. 112, second paragraph rejection, presented in the previous Office Action for claim 38, is withdrawn.

Regarding independent claims 28 and 38, the Applicants note that these claims as now amended express a *plurality* of pre-specified data units that together define a document, wherein each data unit includes (i) display elements (e.g. graphic objects) and (ii) management elements associated with the display elements. The Applicants assert that claims 28 and 39, along with the remaining pending claims which depend thereon, are allowable since Bienz (the "Portable Document Format Reference Manual, Version 1.2," to Bienz et al.) does not teach storing a document as a plurality of such pre-specified units, e.g. files. In response, the Examiner presents the U.S. Patent of Mastie (U.S. Patent No. 6,480,866), which as shown below, teaches storing a document as a set of distinct page files. The Applicants' arguments have thus been considered, but are moot in view of the following new grounds of rejection, which are required in response to Applicants' amendments.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 28, 31, 33-36, 38-39, 41, and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over the "Portable Document Format Reference Manual, Version 1.2," which is attributed to Bienz et al. (and hereafter referred to as "Bienz"), and also over U.S. Patent No. 6,480,866, which is attributed to Mastie. In general, Bienz describes the Portable Document Format (PDF), a file format used to specify electronic documents such that the documents are easily and reliably exchanged and viewed (see section 2.1, on page 27). Such PDF documents are stored as files (see section 2.3.2, on page 30), which are interpreted to be maintained in computer memory. As described below, each of these files comprises data to be displayed, in addition to all the display information and scroll display control information necessary for the display of the data. Each of these PDF files is consequently considered a "pre-specified unit," like recited in the claimed invention. Therefore, computer memory having one or more PDF files stored thereon is considered a data storing medium with display data recorded thereon, wherein the display data is recorded in the form of pre-specified units.

Specifically regarding claims 28 and 38, it is understood that a PDF file describes a document, and comprises all of the information necessary to display the document. For example, Bienz discloses that a PDF document is implemented by a hierarchy of objects included within a PDF file (see section 6.1 on page 71). In particular, each page of the document is realized by a

corresponding "Page object," the Page object being efficiently accessed through a "Pages tree" structure (see section 6.3, beginning on page 75). Each Page object describes the content and functionality of a single document page (see section 6.4, beginning on page 77), and particularly comprises a "Contents" parameter, which references the page description of its corresponding document page (see section 6.4, on page 78). It is understood that this page description comprises various graphic objects, considered display elements and image data objects like recited in claims 28 and 38, respectively, which are displayed within the associated document page (for example, section 8.1 beginning on page 209). It is also understood that, in addition to all the necessary display data, a PDF file comprises all the information necessary to scroll the document. For example, Bienz discloses that a PDF file may define one or more article "threads," each comprising one or more "beads" (see section 6.12 beginning on page 111). An article bead is associated with a distinct section of an article, whereby a plurality of such beads may be linked into a common thread, so that a user may read an entire article by scrolling from one article bead to the next, rather than from one page to the next (see section 6.12, beginning on page 111). In particular, each bead includes an "R" parameter, which identifies the page location on which its associated article content (i.e. graphic objects) appears (see Table 6.44 on page 112). It is understood that this page location is specified in a coordinate system according to the coordinate values assigned to the article content, since the R parameter is denoted by 4 values, wherein these 4 values identify the coordinates values of the corners of the rectangle surrounding the associated article content (see section 7.1 on page 133). Each article bead is thus specified by a rectangle, or in other words, by two sets of line segments having different directions in a coordinate system - two parallel line segments extending in a first direction, and two parallel line

segments extending in a second, transverse direction. The coordinate values denote the starting and ending points of these line segments. Additionally, each bead includes a "T" parameter, a "V" parameter, and an "N" parameter, which respectively identify the thread on which the bead belongs, the previous bead in the thread, and the next bead in the thread (see Table 6.44 on page 112). The beads are accordingly linked into a common thread such that a user may scroll from bead to bead, i.e. article section to article section, in order to read an entire article. It is interpreted that in doing so, the above-described T, V, and N parameters are used to move from one bead to the next, whereby for each bead, the above-described R parameters reference the bead's associated article content, which is displayed at an appropriate zoom level (for example, see section 6.12 on page 111). Consequently, as a thread is formed by a plurality of intervals, namely beads, which are specified by line segments having different directions in a coordinate section defined by the PDF file, a thread is considered a scroll path along which scrolling through a document is to be conducted. Bienz thus presents a pre-specified unit of display data, specifically a PDF file, which includes (i) display elements (e.g. graphic objects) for display by the display device, and (ii) management elements associated with the display elements, the management elements including all information necessary for the display device to select among the display elements for display, including a display of selected ones of the display elements in a predetermined sequence as a scroll display, and wherein the information for selecting among the display elements for scroll display defines a plurality of intervals, i.e. beads, that together form a scroll path, i.e. thread, among the display elements along which the scroll display is to be conducted, the intervals forming the scroll path being specified by line segments respectively defined by coordinate values of a starting point and an ending point in a coordinate system

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defined by the pre-specified unit according to coordinate values assigned to the display elements in the pre-specified unit. Bienz, however, fails to explicitly disclose that a plurality of such pre-specified units, i.e. PDF files, may be used together to define a document, as is expressed in claims 28 and 38.

Nevertheless, Mastie teaches storing each page of a document within a single file written via a page description language (for example, see column 3, lines 39-50; and column 4, lines 50-63). The plurality of these files may then be assembled into a document (for example, see column 3, lines 39-50; and column 4, lines 50-63). As the size of PDF file is arbitrary, it is understood that such a PDF file may describe only a single page (for example, see section 6.3, beginning on page 75 of Bienz).

Accordingly, it would have been obvious to one of ordinary skill in the art, having the teachings of Bienz and Mastie before him at the time the invention was made, to implement the PDF format taught by Mastie to create a plurality of PDF files, each describing a single page of a document, like taught by Mastie. It would have been advantageous to one of ordinary skill to utilize such a combination because the utilization of such a plurality of individual page files is a conventional and widely-used arrangement for printing a document, as is demonstrated by Mastie (for example, see column 3, lines 1-15).

Concerning claim 39, Bienz discloses that the document described by a PDF file may comprise one or more pages (for example, see section 6.3, beginning on page 75). A PDF file is consequently considered a "page grouping" like recited in claim 39, and Bienz thus teaches that a pre-selected portion of display data may be a page grouping of image data objects, and all of the

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management information associated therewith, required by the display device for the display, and the scroll display, thereof.

As per claims 31 and 41, Bienz discloses that a PDF document may display a link, similar to a hypertext link, which may be selected to display a thread of the same PDF document, or of a different PDF document (see section 6.9 beginning on page 96, and particularly section 6.9.5 beginning on page 101). It is understood that a user may encounter such a link when reading through an article thread, and that the user may select the link in order to display another article thread referenced by the link. Such a link is thus considered information for linking with another scroll display path, i.e. thread, and Bienz is therefore considered to teach that the management information associated with image data objects may contain information for linking with another scroll display path.

Referring to claims 33 and 43, the article beads of Bienz are considered to constitute "scroll display control information," as is described above in the paragraph regarding claim 28. As further shown above, each bead includes an R parameter, which delineates a specific article section by means of four coordinate values, these coordinate values defining a rectangle. The beads are linked into a common thread so that a user may scroll from bead to bead in order to read an entire article, whereby for each bead, the content bounded by this rectangle is displayed at an appropriate zoom level (for example, see section 6.12 on page 111). Thus the management elements taught by Bienz include management elements associated with selected areas of the coordinate system defined by the PDF file.

As per claims 34 and 44 the article beads described by Bienz are considered to constitute "scroll display control information," as is described above in the paragraph regarding claim 28.

Each bead includes an R parameter, which as shown above, delineates specific document content by means of four coordinate values, these coordinate values defining a rectangle about the content. The beads are linked into a common thread so that a user may scroll from bead to bead in order to read an entire article, whereby for each bead, the content bounded by this rectangle is displayed at an appropriate zoom level (for example, see section 6.12 on page 111).

Consequently, it is understood that the size of such a rectangle affects the amount of zoom for the document content referenced by the bead; for example, if the rectangle is the size of an entire page, the document content may not be zoomed much, whereas if the rectangle is much smaller, the document content may be enlarged more significantly. Thus the scroll display control information taught by Bienz includes information, specifically the rectangle identified by the R parameter, which intrinsically specifies a scale of enlargement or reduction of a display area for scroll display.

As per claims 35 and 45, the B parameter of Bienz, and its referenced article beads, are considered "scroll display control information," as is described above in the paragraph regarding claims 28 and 29. Such an article bead includes a R parameter, which as shown above, references specific document content by means of four coordinate values, these coordinate values defining a rectangle about the document content. Regarding the claimed invention, Bienz discloses that PDF documents may include movies and sounds (see section 1.3 on page 20). It is therefore understood that the document content referenced by the above-described R parameter may comprise movies and/or sounds. Consequently, the scroll display control information taught by Bienz includes synchronous reproduction information, namely the R parameter, which

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specifies data content to be reproduced in synchronism with the scroll display, and wherein this data content may comprise non-motionless data such as sound and/or moving images.

In reference to claims 36 and 46, Bienz discloses that a computer is used for reproducing and displaying a PDF document (for example, see section 2.2 on page 28). As described above, such a PDF document is stored in a storage medium and is scrolled based on the above-described scroll display control information. Such a computer presenting the PDF document described by Bienz is therefore considered a "display device," like that recited in claims 36 and 46.

Claims 29, 37, and 47-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bienz and Mastie, which is described above, and also over U.S. Patent No. 5,634,064, which is attributed to Warlock et al. (and hereafter referred to as "Warnock"). Specifically regarding claim 29, a PDF file comprises information used to display and control a particular document, and specifically comprises scroll information specifying one or more threads for the document. As described above, such a PDF file may comprise only a single page. It is understood, in other words, that the pre-specified unit of display data may be a page. Regarding such an occurrence, however, neither Bienz nor Mastie explicitly disclose that a single page may comprise a thread, formed by a plurality of beads, as is expressed in claim 28, upon which claims 29 depends.

Like the PDF format described above, Warnock discusses documents which may comprise one or more articles, each article having sections on different pages of the document, whereby a thread may be created so that a user may read an entire article by scrolling from one article section to the next, rather than from one page to the next (see column 2, line 30 – column

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3, line 31). Regarding the claimed invention, Warnock teaches that a single page of a PDF document may have more than one article section of the same article, such that a user can display a single article section of the page at a time, and scroll from one article section to the next (for example, see column 5, line 46 – column 7, line 31). When displayed, each article section is automatically zoomed to fit within the display window, yet may still require scrolling if the length of the article section, for example, does not fit within the window (see column 10, line 56-column 11, line 36). Particularly, each article section is displayed at either the beginning of the section and scrolled toward the end of the section, or displayed at the end of the section and scrolled toward the beginning (see column 11, line 31 – column 12, line 9). Each article section is thus implicitly associated with two vectors which further specify the scroll path through an article, one vector starting at the beginning of the section and ending at the end, the other vector starting at the end of the section, and ending at the beginning of the section.

It would have been obvious to one of ordinary skill in the art, having the teachings of Bienz, Mastie, and Warnock before him at the time the invention was made, to modify the PDF format taught by Bienz and Mastie, such that multiple article beads may be linked on the same page, as is done by Warnock. It would have been advantageous to one of ordinary skill to utilize such a combination because the ability to navigate between particular sections of an article located within the same page is beneficial in certain document layouts, such as columnar layouts, as is demonstrated by Warnock.

With respect to claims 48, 49, 50, 51, 52, and 53, Warnock teaches that the scroll path though each bead is inherently conducted along one of two vectors, one vector starting at the beginning of the bead and ending at the end, the other vector starting at the end of the bead, and

ending at the beginning, as is described above. As further described above, the PDF format comprises an "R" parameter associated with each bead, the "R" parameter defining a rectangle as 4 coordinate values in a coordinate system defined by the PDF file within which the bead is located. This rectangle, surrounding the article section, identifies the beginning and end of the section, and therefore defines the vectors by which the scroll paths through the section are defined. It is consequently understood that with the above-described combination of Bienz, Mastie, and Warnock, the scroll display control information, specifically the "R" parameter for each bead, specifies the scroll path of the display of the display information as vectors identified by coordinate values of the pages in a coordinate system defined by the display data according to coordinate values assigned to the article sections in each page. Each PDF file of display data may be sequentially displayed along such vectors, since as described above, the beads are linked into a common thread so that a user may scroll from bead to bead in order to read an entire article of the PDF file.

In reference to claims 54 and 55, Warnock discloses that each article bead may be associated with a zoom level, the zoom level being based on the width of the article section (see column 11, lines 4-30). As described above, the PDF format comprises an "R" parameter associated with each bead, the "R" parameter defining a rectangle surrounding the article section associated with the bead. This rectangle, since it surrounds the article section, defines the width of the section. It is consequently understood that the with the above-described combination of Bienz, Mastie, and Warnock, the scroll display control information, specifically the "R" parameter for each bead, defines an appropriate zoom level for the bead, and is thus considered a

scale of enlargement or reduction of a display area for scroll display on the screen of a display device.

Specifically regarding claims 37 and 47, Bienz discloses that a computer is used for reproducing and displaying a PDF document, as is described above. As further described above, such a PDF document is stored in a storage medium and is scrolled based on the above-described scroll display control information. This computer presenting the PDF document described by Bienz is therefore considered a "display device," like that recited in claims 36 and 46. It is understood that this computer comprises a processing unit, as known in the art, whereby this processing unit ultimately implements and controls the scroll display of the image on the computer's display screen. Consequently, such a processing unit is considered a "scroll indicating means," like that recited in claims 37 and 47. Warnock teaches that the PDF document, displayed via such a processing unit, may be scrolled only while the user instructs the computer to scroll the document in either the forward of backward directions along a thread, i.e. scroll path (for example, see column 2, lines 38-55; and column 10, line 56 – column 12, line 9). The above-described combination of Bienz, Mastie, and Warnock is thus considered to teach a display device comprising a scroll indicating means for scroll display, wherein the scroll display is conducted based on scroll display information only while a user instructs the a display controller to perform the scroll display in either the forward or backward directions along a scroll path.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over the abovedescribed combination of Bienz and Mastie, and also over Japanese Patent No. 5-323941, which

is attributed to Michihiro Ota (and hereafter referred to as "Ota"). As described above, Bienz and Mastie teach a data storage medium with display data recorded thereon, wherein like recited in claim 38, the display data is provided with all the necessary information for scroll display on a display screen. This information for scroll display comprises a plurality of beads denoting article sections, which as described above, may be linked into a common thread, so that a user may read an entire article by scrolling from one article bead to the next, rather than from one page to the next (see section 6.12, beginning on page 111). Neither Bienz nor Mastie, however, explicitly discloses that this information for scroll display includes information specifying a scroll display speed, as is expressed in claim 42.

Like Bienz, Ota discloses a method for presenting a document on a display screen, whereby the document can be scrolled. Regarding the claimed invention, Ota teaches that the scroll speed may be varied according to the number of characters displayed (see the abstract of Ota). Consequently it is understood that the document described by Ota is associated with information for scroll display, wherein this information for scroll display includes information on a scroll display speed.

It would have therefore been obvious to one of ordinary skill in the art, having the teachings of Bienz, Mastie, and Ota before him at the time the invention was made, to modify the information for scroll display taught by Bienz and Mastie, such that the articles may be scrolled at a rate proportional to the number of characters displayed, as is taught by Ota. It would have been advantageous to one of ordinary skill to utilize such a combination because the resulting document scrolling speed would match the document reading speed of a user, as is taught by Ota (see the abstract of Ota). This is a desirable attribute for a document displaying system. Thus

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with this combination of Bienz, Mastie, and Ota, the beads of an article thread are each scrolled at a rate proportional to the number of characters displayed in the article section associated with each bead. In other words, the content of the article section implicitly specifies the scroll display speed of that section. The content of such an article section is determined by the P and R parameters of the bead associated with that article section, as is described above in the rejection for claims 28-29 and 38-39. Thus the P and R parameters of each bead specifies the content of an article section, which in turn includes information (namely the characters displayed in that article section) that determines the scroll display speed, and therefore, the P and R parameters are understood to inherently include information specifying the scroll display speed. Consequently with this combination of Bienz, Mastie, and Ota, the scroll display control information includes information specifying a scroll display speed.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over the above-described PDF documents taught by Bienz, and also over Japanese Patent No. 5-323941, which is attributed to Michihiro Ota (and hereafter referred to as "Ota"). As described above, Bienz discloses a data storage medium with display data recorded thereon, wherein the display data is provided with all the necessary information for scroll display on a display screen. This information for scroll display comprises a plurality of beads denoting article sections, which as described above, may be linked into a common thread, so that a user may read an entire article by scrolling from one article bead to the next, rather than from one page to the next (see section 6.12, beginning on page 111). Bienz however does not explicitly disclose that this information

for scroll display includes information specifying a scroll display speed, as is expressed in each of claim 32.

Like Bienz, Ota discloses a method for presenting a document on a display screen, whereby the document can be scrolled. Regarding the claimed invention, Ota teaches that the scroll speed may be varied according to the number of characters displayed (see the abstract of Ota). Consequently it is understood that the document described by Ota is associated with information for scroll display, wherein this information for scroll display includes information on a scroll display speed.

It would have therefore been obvious to one of ordinary skill in the art, having the teachings of Bienz and Ota before him at the time the invention was made, to modify the information for scroll display taught by Bienz, such that the articles may be scrolled at a rate proportional to the number of characters displayed, as is taught by Ota. It would have been advantageous to one of ordinary skill to utilize such a combination because the resulting document scrolling speed would match the document reading speed of a user, as is taught by Ota (see the abstract of Ota). This is a desirable attribute for a document displaying system. Thus with this combination of Bienz and Ota, the beads of an article thread are each scrolled at a rate proportional to the number of characters displayed in the article section associated with each bead. In other words, the content of the article section implicitly specifies the scroll display speed of that section. The content of such an article section is determined by the P and R parameters of the bead associated with that article section, as is described above in the rejection for claims 28-29 and 38-39. Thus the P and R parameters of each bead specifies the content of an article section, which in turn includes information (namely the characters displayed in that

article section) that determines the scroll display speed, and therefore, the P and R parameters are understood to inherently include information specifying the scroll display speed. Consequently with this combination of Bienz and Ota, the scroll display control information includes information specifying a scroll display speed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (571) 272-4044. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph Jan Harris

btb 4/17/2006